

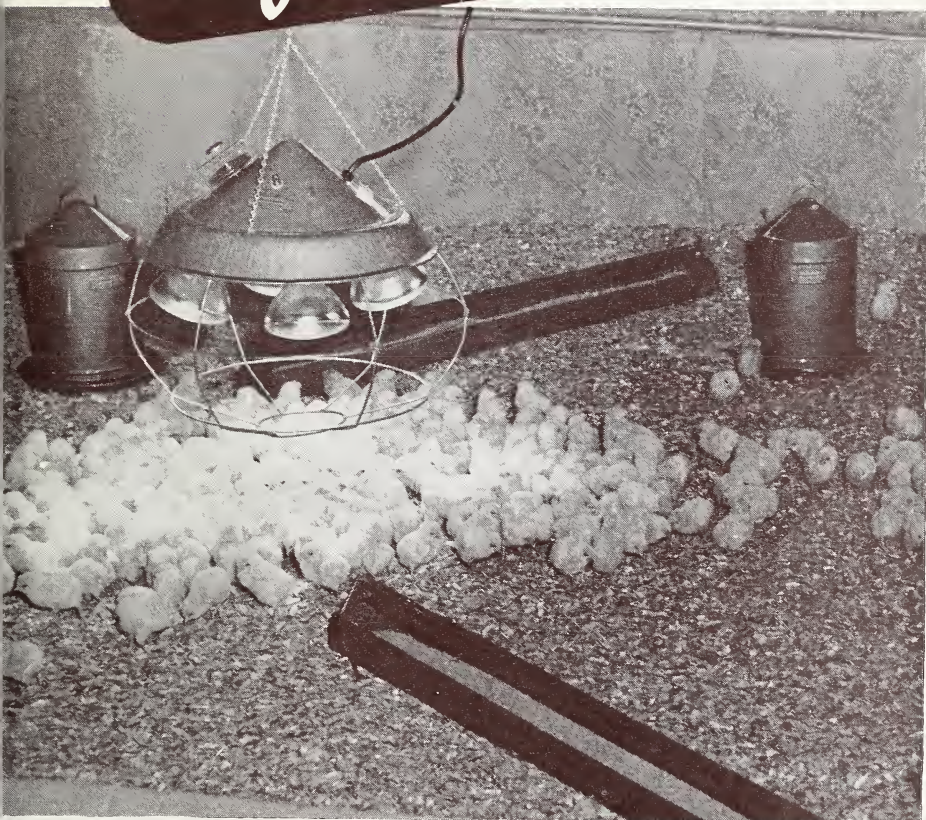
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# Brooding Chicks With Infrared Lamps

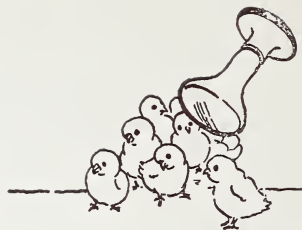


Leaflet No. 397

U. S. DEPARTMENT OF AGRICULTURE

# Brooding Chicks With

## *Infrared Lamps*



Poultry producers are turning more and more to the infrared lamp method of brooding chicks.

With infrared brooders there is no fuel to carry, no ashes to remove, no burners to clean. Brooders are light in weight, and are easy to set up, move, and store. You can see the chicks without lifting a cover.

The price of readymade infrared brooders ranges from \$3 to \$40, depending on the number of lamps, type of brooder, and whether they have thermostats. You can build an infrared brooder from plans available from your State agricultural extension service. Ask your county agent.

Infrared brooders usually cost no more to operate than some other types of brooders. Thermostats tend to reduce the cost of brooding.

The brooders are efficient. Radiation from an infrared lamp warms only the objects to which it is directed: it does not warm the air. This eliminates the waste of heating those parts of a building that are not used for brooding.

The labor-saving and economy aspects of infrared brooders appeal especially to farmers who raise 100 to 500 chicks per brood and are usually busy with other work at brooding time. And they are popular with large poultry producers too. Many use them to supplement

another brooding method. They heat their brooder houses to 50°–60° F. and use infrared lamps to supply the additional heat needed. Some large producers are using infrared brooders exclusively.

### Material and Equipment

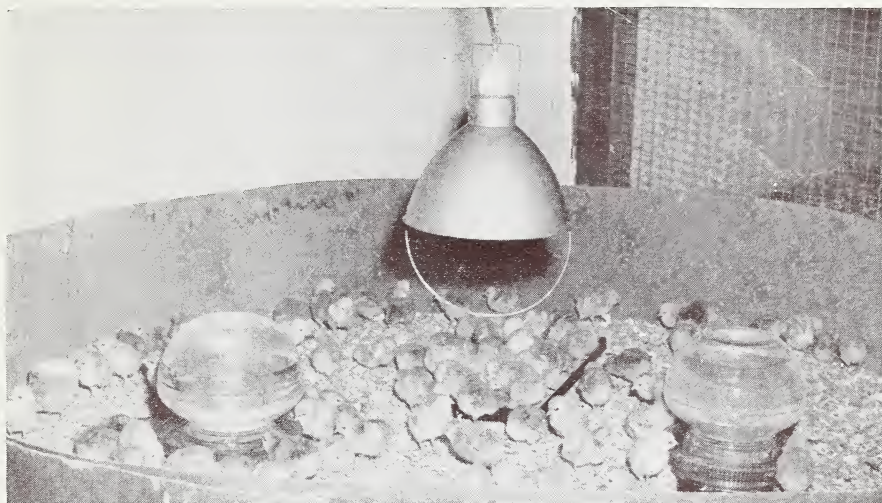
Whether you buy or build an infrared lamp brooder, the following are points to consider:

Make the brooder house draft free. Insulating the house will reduce drafts, cut down on the amount of electricity used, and aid in ventilation control.

Check with your power supplier or an electrician if you're not sure the wiring to the brooder house is safe and adequate for the number of lamps you will use.

Buy enough lamps to furnish sufficient heat at the lowest temperatures expected. Infrared lamps come in 125-, 250-, and 375-watt sizes. The 250-watt size, which costs about \$1.10, is the one most commonly used for poultry brooding. Buy lamps that are equipped with built-in reflectors unless your brooder is designed for the use of lamps without reflectors. Hard glass lamps, which cost twice as much as ordinary lamps, or guards or shields are good insurance against breakage.





One infrared lamp can be used to brood up to 100 chicks.

Use porcelain sockets.

Support the brooder with a chain or wire, *not* with the cord that carries the electricity. Use Type HSJ wire with not more than four 250-watt lamps on No. 14 wire and not more than seven 250-watt lamps on No. 12 wire.

Mount the lamps 12 to 24 inches apart under a baffle when building your own brooder. You may want to hang a cloth (feed bags will do) or a plastic curtain around the baffle to confine the heat. But keep the curtain at least 12 inches away from any lamp.

Use a thermostat to reduce operating costs.

Keep spare lamps and fuses on hand.

Brooders should have guards to prevent lamps from coming in accidental contact with the litter or other combustible material.

### How To Use the Lamps

The following table shows the approximate number of chicks that can be brooded with a 250-watt

lamp at various room temperatures:

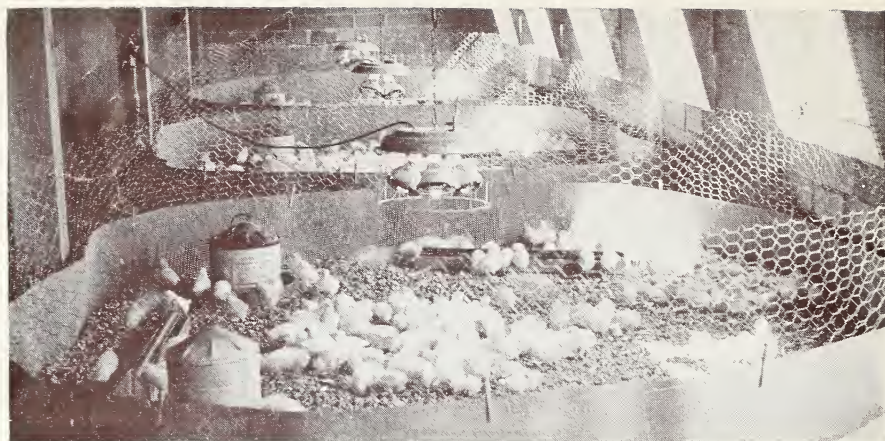
Room Temperature	Number of Day-Old Chicks
85° F.	110
75	100
65	90
55	80
45	70
35	60

A 4- or 6-lamp brooder is usually required for brooding a flock of 300 to 500 chicks.

Suspend the brooder so that no surface of a lamp can get closer than 15 inches to the litter.

Place a nonperforated metal or cardboard chick guard 12 to 18 inches high around the brooder for the first week or 10 days to prevent floor drafts and to confine the chicks to the "comfort zone."

Let the chicks tell you when the temperature is right. They're cold if they crowd under the lamps. Supply more heat by lowering the lamps to not less than 15 inches above the litter, or use more or higher-wattage lamps. (Do not overload the circuit; the load on No. 12 wire should not exceed 1750 watts.)



Multiple infrared-lamp units for brooding large number of chicks.

If the chicks are too warm, they'll move to the outer limits of the "comfort zone." Turn off some of the lamps; use smaller lamps (two 125-watt lamps heat more floor area than one 250-watt) or raise the brooder to 24 inches above the litter. A thermometer won't help—you are heating the chicks only, not the air.

Ventilate to keep the walls and litter dry and the air fresh. An electric exhaust fan will help do this.

Check lamps regularly to make sure they are screwed firmly into the sockets.

Take immediate steps to protect your chicks when there is a power outage. There's no problem if you have a standby generator of sufficient capacity that has been prop-

erly installed. Just put it into operation. But if you have no standby unit, put the chicks back into their shipping boxes and place the boxes in a heated room. If the chicks are too large for the shipping boxes, provide temporary heat with a small stove. You may want to install a mechanical or battery-operated alarm to warn you when the current goes off; they're inexpensive.

\* \* \* \*

When you don't need them for poultry brooding, infrared lamps have many other uses around the farm and home. They can be used for brooding pigs, calves, and lambs; for thawing frozen pipes; and for "spot heating" for human comfort.

This leaflet was prepared by John G. Taylor and J. M. Stanley, Agricultural Engineering Research Branch, Agricultural Research Service.

Washington, D. C.

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